

Claims

That which is claimed:

- 5 1. A product for applying a coating to a food product comprising:
a first container for storing the coating;
a second container for holding at least a portion of the coating prior to deposition
of the coating on the food product; and
at least one wheel comprising at least two coaxial disks, wherein the two disks are
10 spaced apart to form an inner space, and wherein the two outer faces of each disk
comprise at least a portion of the outer surface of the wheel, and wherein at least a
portion of the wheel is positioned in the first container and at least a portion of the wheel
is positioned proximate at least a portion of the second container such that upon rotation
of the wheel, the wheel transfers coating from the first container to the second container.
15
2. The product of claim 1, wherein coating from the first container is capable of at
least partially covering the outer surface of both disks and at least partially filling the
inner space between the two disks as the wheel is rotated.
- 20 3. The product of claim 1, wherein the first container is positioned below the second
container such that as the wheel is rotated, coating is lifted from the first container to the
second container.

4. The product of claim 1, wherein the second container comprises means to remove coating from the wheel and to deliver the coating to the second container.

5. The product of claim 1, wherein the second container comprises at least one protrusion adapted to remove coating from the wheel and to deliver the coating to the second container.

6. The product of claim 5, wherein the second container comprises a first protrusion extending at least partially into the inner space between the two disks.

10

7. The product of claim 6, wherein the second container comprises a second protrusion adjacent to the outer face of the first disk and a third protrusion adjacent to the outer face of the second disk.

15 8. The product of claim 1, wherein the second container comprises slots for each disk, such that as the disks rotate through the second container, coating is removed from the outer surface of both disks and the inner space between the disks and is deposited in the second container.

20 9. The product of claim 1, wherein the second container comprises a trough.

10. The product of claim 1, wherein the second container comprises an opening adapted to allow at least a portion of the coating to exit from the second container.

11. The product of claim 10, wherein the opening in the second container further comprises a ledge extending from the opening.

5 12. The product of claim 11, wherein the ledge further comprises at least one vertical face.

13. The product of claim 10, wherein the opening is adapted to allow a portion of the coating to flow from the second container as a thin curtain of coating.

10

14. The product of claim 1, further comprising a conveyor to transport at least one food product beneath the second container.

15 15. The product of claim 14, wherein the conveyor comprises a plurality of rubber rings.

16. The product of claim 1, wherein the food product comprises a dough-based product.

20 17. The product of claim 1, wherein the food product comprises doughnuts.

18. The product of claim 1, wherein the coating comprises a sugar-based coating.

19. The product of claim 1, wherein the coating comprises a glaze mixture.
20. The product of claim 1, wherein the disks comprise plastic.
- 5 21. The product of claim 1, wherein the disks are up to about 4 feet in diameter.
22. The product of claim 1, wherein the disks are from about one foot to about two feet in diameter.
- 10 23. The product of claim 1, wherein the wheel comprises at least one additional disk positioned between the first and second disks.
24. The product of claim 1, wherein the wheel comprises an spacer that is positioned between the two disks so as to reduce the inner space between the two disks.
- 15 25. The product of claim 1, wherein the second container is adapted to transfer coating to at least one food product in excess and wherein the first container is positioned to receive the excess coating from the second container.
- 20 26. The product of claim 1, further comprising an aperture adapted to drain coating from the first container.

27. The product of claim 1, further comprising a water jacket that surrounds at least a portion of the first container.

28. The product of claim 27, wherein the water jacket is adapted to maintain the
5 temperature of a coating positioned in the first container.

29. The product of claim 1, further comprising a second wheel, the second wheel comprising at least two coaxial disks, wherein the two disks of the second wheel are spaced apart to form an inner space, and wherein the two outer faces of each disk
10 comprise at least a portion of the outer surface of the second wheel.

30. The product of claim 29, wherein the first container comprises a divider positioned to divide the first container into a first sub-container and a second sub-container, wherein at least a portion of the first wheel is positioned in the first sub-
15 container and wherein at least a portion of the second wheel is positioned in the second sub-container.

31. The aproduct of claim 30, wherein the divider comprises a closable port adapted allow mixing of the contents of each sub-container.
20

32. The product of claim 29, wherein the second container comprises a panel to divide the second container into a first sub-trough and a second sub-trough, wherein at least a portion of the first wheel is positioned proximate at least part of the first sub-

trough and wherein at least a portion of the second wheel is positioned proximate at least part of the second sub-trough.

33. The product of claim 32, wherein the second container comprises a slot into
5 which the panel is inserted.

34. The product of claim 1, wherein the transfer of the coating from the first container to the second container provides a visual display which may be viewed by an observer.

10 35. The product of claim 34, wherein the visual display comprises a feature which may be displayed in a retail setting.

36. A process of applying a coating to at least one food product comprising:

- (a) at least partially filling a first container with a coating;
- 15 (b) positioning at least one wheel comprising at least two coaxial disks such that at least a portion of the wheel is positioned in the first container and at least a portion of the wheel is positioned proximate to at least a portion of a second container, wherein the two disks are spaced apart to form an inner space, and wherein the two outer faces of each disk comprise at least a portion of the outer surface of the wheel;
- 20 (c) rotating the wheel such that at least a portion of the coating from the first container is transferred to the second container; and
- (d) covering at least a portion of the surface of at least one food product with the coating from the second container.

37. The process of claim 36, further comprising rotating the wheel such that at least a portion of the outer surface of both disks is covered with the coating from the first container and at least a portion of the inner space between the two disks is filled with the
5 coating.

38. The process of claim 36, wherein the first container is positioned below the second container such that the wheel lifts the coating from the first container to the second container.
10

39. The process of claim 36, wherein the second container comprises a means to remove at least a portion of the coating from the wheel.

40. The process of claim 36, wherein the second container comprises at least one protrusion, and further comprising removing at least a portion of the coating from the
15 wheel with the at least one protrusion.

41. The process of claim 40, wherein the second container comprises a first protrusion extending at least partially into the inner space between the two disks, a
20 second protrusion adjacent the outer face of the first disk, and a third protrusion adjacent the outer face of the second disk.

42. The process of claim 36, wherein the second container comprises slots for insertion of each disk, such that as the disk rotates through the second container, coating is removed from the outer surface of both disks and deposited in the second container.

5 43. The process of claim 36, wherein the wheel comprises at least one additional disk positioned between the first and second disks.

44. The process of claim 36, wherein the wheel comprises an internal spacer that is positioned between the two disks so as to reduce the inner space between the two disks.

10

45. The process of claim 36, wherein the second container comprises a trough.

46. The process of claim 36, wherein the second container comprises an opening to allow a portion of the coating to flow from the second container.

15

47. The process of claim 46, wherein the opening further comprises a ledge extending from the opening.

20

48. The process of claim 47, wherein the ledge further comprises at least one vertical face.

49. The process of claim 36, wherein the coating flows from the second container as a thin curtain of coating.

50. The process of claim 36, further comprising transporting at least one food product beneath the second container.

5 51. The process of claim 36, wherein coating exits from the second container and flows downwardly to at least partially cover the at least one food product.

52. The process of claim 51, further comprising receiving in the first container excess coating that is dispensed from the second container but that does not cover the food
10 product.

53. The process of claim 36, wherein the at least one food product comprises a dough-based product.

15 54. The process of claim 36, wherein the at least one food product comprises doughnuts.

55. The process of claim 36, wherein the coating comprises a sugar-based coating.

20 56. The process of claim 36, wherein the coating comprises a glaze mixture.

57. The process of claim 36, wherein the transfer of the coating from the first container to the second container provides a visual display which may be viewed by an observer.

5 58. The process of claim 57, wherein the visual display comprises a feature which may be displayed in a retail setting.

59. A process to transfer a coating from a first container to a second container comprising:

- 10 (a) at least partially filling a first container with a coating;
- (b) positioning at least one wheel comprising at least two coaxial disks such that at least a portion of the wheel is positioned in the first container and at least a portion of the wheel is positioned proximate to at least part of the second container, wherein the two disks are spaced apart to form an inner space, and wherein the two outer faces of
- 15 each disk comprise at least a portion of the outer surface of the wheel; and
- (c) rotating the wheel such that at least a portion of the coating from the first container is transferred to the second container.

60. The process of claim 59, further comprising rotating the wheel such that at least a

20 portion of the outer surfaces of both disks is covered with the coating from the first container to at least partially fill the inner space between the two disks.

61. The process of claim 59, wherein the first container is positioned below the second container such that the wheel lifts the coating from the first container to the second container.

5 62. The process of claim 59, wherein the second container comprises a means to remove at least a portion of the coating from the wheel.

63. The process of claim 59, wherein the second container comprises at least one protrusion, and further comprising removing at least a portion of the coating from the
10 wheel with the at least one protrusion.

64. The process of claim 59, wherein the second container comprises a first protrusion extending at least partially into the inner space between the two disks, a second protrusion adjacent to the outer face of the first disk, and a third protrusion
15 adjacent to the outer face of the second disk, and further comprising removing at least a portion of the coating from the wheel with the protrusions.

65. A product for the preparation of food products comprising:
a heating unit for warming a pre-cooked food product; and
20 an apparatus for applying a coating to the warmed food product, wherein the apparatus comprises at least one wheel for transferring the coating from a first container to a second container positioned for holding at least a portion of the coating prior to deposition of the coating on the food product.

66. The product of claim 65, wherein the wheel comprises at least two coaxial disks,
wherein at least a portion of the wheel is positioned in the first container and at least a
portion of the wheel is positioned proximate at least a part of the second container,
5 wherein upon rotation of the wheel, the wheel transfers coating from the first container to
the second container.

67. The product of claim 65, wherein the first container is positioned below the
second container such that the wheel lifts the coating from the first container to the
10 second container.

68. The product of claim 66, wherein the two disks are spaced apart to form an inner
space, and the two outer faces of each disk comprise at least a portion of the outer surface
of the wheel.

15

69. The product of claim 68, wherein coating from the first container is capable of at
least partially coating the outer surfaces of both disks and at least partially filling the
inner space between the two disks as the wheel is rotated.

20 70. The product of claim 68, wherein the second container comprises at least one
protrusion adapted to remove a coating from the wheel and to deliver the coating to the
second container.

71. The product of claim 70, wherein the second container comprises a first protrusion extending at least partially into the inner space between the two disks.
72. The product of claim 71, wherein the second container comprises a second
5 protrusion adjacent to the outer face of the first disk and a third protrusion adjacent to the outer face of the second disk.
73. The product of claim 68, wherein the second container comprises slots for insertion of each disk, such that as the disk rotates through the second container, coating
10 is removed from the outer surface of both disks and deposited in the second container.
74. The product of claim 66, further comprising a second wheel, the second wheel comprising at least two coaxial disks, wherein the two disks of the second wheel are spaced apart to form an inner space, and wherein the two outer faces of each disk
15 comprise at least a portion of the outer surface of the second wheel.
75. The product of claim 65, wherein the second container comprises a trough.
76. The product of claim 65, wherein the second container comprises an opening
20 adapted to allow a portion of the coating to flow from the second container.
77. The product of claim 76, wherein the opening is adapted to allow a portion of the coating to flow from the second container as a thin curtain of coating.

78. The product of claim 65, further comprising a conveyor to transport at least one food product beneath the second container.

5 79. The product of claim 65, wherein the food product comprises a dough-based product.

80. The product of claim 65, wherein the food product comprises doughnuts.

10 81. The product of claim 65, wherein the coating comprises a sugar-based coating.

82. The product of claim 65, wherein the coating comprises a glaze mixture.

83. The product of claim 65, wherein the transfer of the coating from the first
15 container to the second container provides a visual display which may be viewed by an observer.

84. The product of claim 83, wherein the visual display comprises a feature which may be displayed in a retail setting.